



**RoofPoint**

ELEVATING ENVIRONMENTAL PERFORMANCE

# OPTIMIZING THE SUSTAINABLE VALUE OF THE ROOF

March 21, 2013



ROOFPOINT

**James Kirby, AIA**

VP of Sustainability

Center for Environmental Innovation in Roofing

847.997.6785

[jkirby@roofingcenter.org](mailto:jkirby@roofingcenter.org)

[www.roofingcenter.org](http://www.roofingcenter.org)

[www.roofpoint.org](http://www.roofpoint.org)



ROOFPOINT

# RoofPoint

WHY IS IT NEEDED?    WHAT DOES IT OFFER?

# ROOFPOINT GUIDELINE



RoofPOINT



- Covers twenty-three key sustainable roofing strategies, with an emphasis on energy efficiency, and roofing durability and quality

# BUILDING MANAGERS / DESIGNERS



- ◆ **Good Roofing Decisions Made Easier**
  - ◆ Relevant, measurable goals
  - ◆ Covered in a single, comprehensive guideline
- ◆ **Bad Roofing Decisions Avoided**
  - ◆ Roof system durability emphasized
  - ◆ Roof maintenance emphasized
- ◆ **Best Roofing Decisions Recognized and Rewarded**
  - ◆ Program offers recognition for all roofing stakeholders

# ROOFING PROFESSIONALS



- ◆ Sets a higher benchmark for owner expectations
- ◆ Establishes roofing professionals (sales agents, licensed contractors, affiliated consultants) as long-term partners
- ◆ Provides a structured and non-proprietary approach to value selling
- ◆ Serves as a counterweight to value-engineering

ROOFPOINT VALUE PROPOSITION  
**ROOFING INDUSTRY**



RoofPoint

- ◆ Increases public awareness of the value of roofing
- ◆ Facilitates access to policymakers and legislators
- ◆ Increases industry ownership of the rooftop / roofing value chain
- ◆ Serves as a counterweight to well-meaning but uninformed green concepts



## *The Challenge of Whole-Building Rating Systems:*

- ◆ **New Construction Focus**
  - ◆ Addresses only 20% of annual roofing market potential
  
- ◆ **System Complexity**
  - ◆ Costly to apply to smaller scale roofing projects
  
- ◆ **Lack of Emphasis on Primary Roofing Function**
  - ◆ Roofs must still keep water out of the building...and for a long time



STRATEGIC RESOURCE

# MULTIPLIER EFFECT...

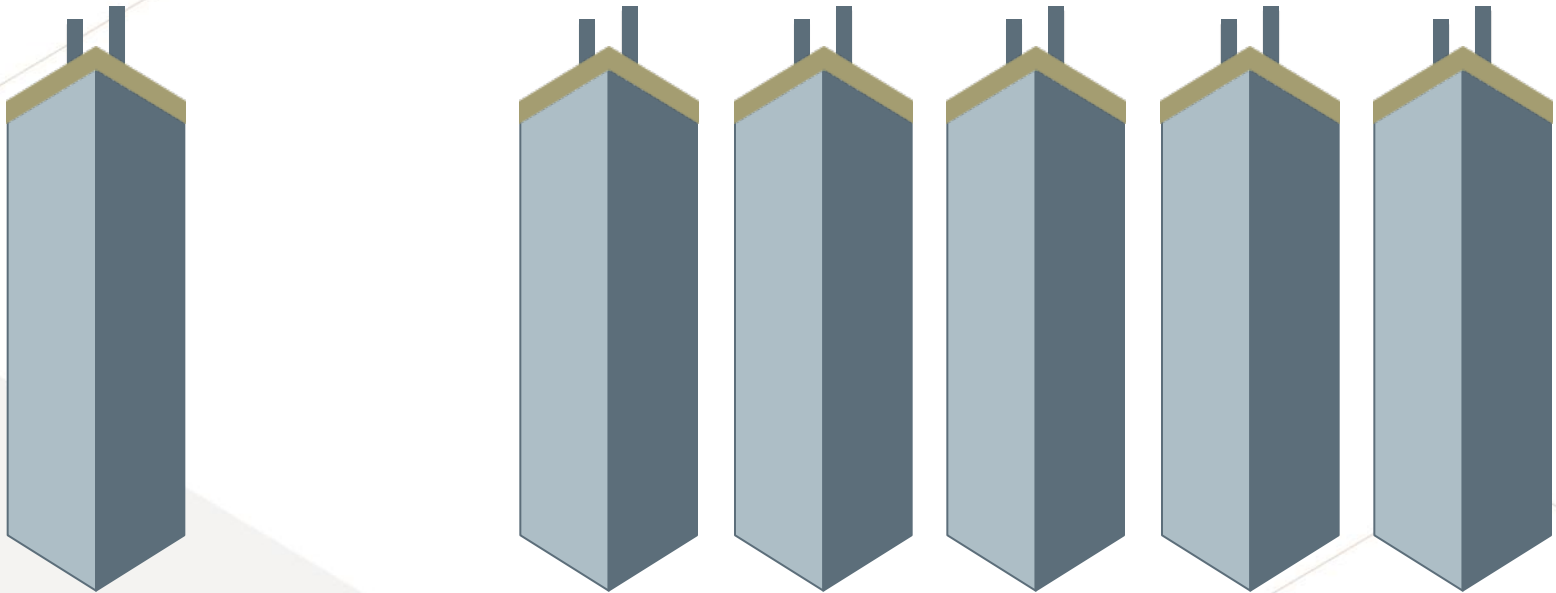


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## NONRESIDENTIAL ROOFING MARKET: 2010

NEW BUILDINGS  
< 0.5 BILLION SQ. FT.

EXISTING BUILDINGS  
>2.5 BILLION SQ. FT.



EACH BUILDING REPRESENTS 500 MILLION SQ. FT. OF ROOFING OPPORTUNITY

# ENERGY AND MORE...



- **Energy Efficiency**
  - 700+ Trillion BTU Annual Energy Savings Potential
- **New Energy Production**
  - 25+ Grand Coulee Dams of Solar Energy Potential
- **Co-Benefits**
  - Improved air quality / reduced heat island effects
  - Reduced water pollution / increased water supply
  - Reduced construction waste
  - Renewable / recyclable / reusable materials
  - Expanded building service life
  - Enhanced occupant safety and productivity



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# RoofPoint

HOW IT WORKS

# RoofPOINT FUNCTION



**GUIDELINE**

1. ....
2. ....
3. ....
4. ....
5. ....

  
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**CHECKLIST**

- .....
- .....
- .....
- .....
- .....

  
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**ASSESSMENT SYSTEM**

OPTION A:	OPTION B:
+	+
+	+
+	+

  
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**RECOGNITION**

THIS IS TO CERTIFY  
THAT \_\_\_\_\_ MEETS  
THE CRITERIA FOR A  
ROOFPOINT ROOF

  
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# RoofPOINT STRUCTURE



RoofPOINT

ENVIRONMENTAL CATEGORIES  
(SECTIONS)



KEY STRATEGIES  
(CREDITS)



SPECIFIC GOALS  
(INTENTS)



MEASURABLE CRITERIA  
(REQUIREMENTS)



ASSESSMENT SYSTEM  
(SCORING)

## SECTION 1: ENERGY MANAGEMENT: E2 BEST THERMAL PRACTICES

### INTENT

Maximize the value of thermal roof insulation through design and installation practices that minimize thermal discontinuities within the roofing system.

### REQUIREMENT E2A: MULTIPLE LAYER INSULATION

If above-deck board insulation is used to meet thermal insulation requirements, install the insulation boards in two or more layers with staggered joints.

### REQUIREMENT E2B: THERMAL DISCONTINUITIES

Install the roof system using any of the following options to further minimize thermal discontinuities in the roof insulation:

- Mechanically fasten the bottom layer(s) of the board insulation and install the upper layer(s) using a code-approved insulation adhesive.
- Attach all layers of roof insulation using code-approved non-thermal bridging mechanical fasteners.
- Install the insulation layers without mechanical fasteners using a ballasted or protected membrane system.
- Install the insulation monolithically using spray polyurethane foam (SPF), lightweight insulation concrete or similar technology.

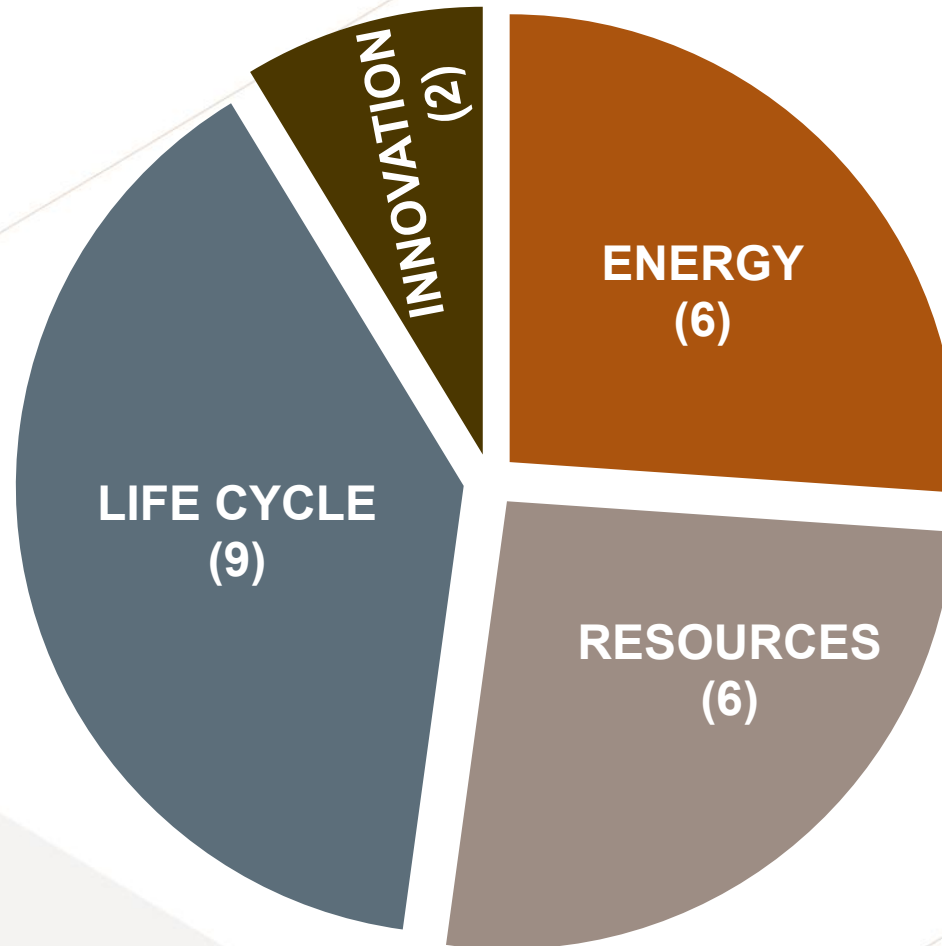
### TECHNOLOGIES AND STRATEGIES

The value of thermal roof insulation can be optimized by minimizing gaps, voids and other discontinuities within the overall insulation assembly. This can be accomplished using a variety of techniques suitable to many different types of low-slope roofing systems.

The requirement to install roof insulation boards in two or more layers typically is necessary as a practical matter to achieve the overall R-value requirements of Credit E1. Chapter 2 of the most recent edition of the National Roofing Contractors Association (NRCA) Roofing Manual: Membrane Systems recommends multiple layers of insulation whenever the total roof insulation thickness exceeds 2 inches. The most recent edition of the NRCA manual as well as other industry guidelines also recommend that each layer of roof insulation not exceed a specified maximum thickness, depending on insulation type and the particular industry guideline. Accordingly, the roof system designer is encouraged to review these maximum board thickness recommendations and to incorporate maximum insulation board thickness criteria in the roofing project specification.



## RoofPOINT CREDITS



# SIMPLICITY



- ◆ Based on well-known and widely accepted standards
- ◆ “Balanced Scorecard” scoring approach eliminates need for complex weighting schemes
- ◆ Simple project submission form
- ◆ Fast and simple web-based application system
- ◆ Emphasis on low transaction costs and low dollar costs

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# FIVE FUNCTIONAL AREAS



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- ◆ Energy Management
- ◆ Materials Management
- ◆ Water Management
- ◆ Durability/Life Cycle Management
- ◆ Environmental Innovation in Roofing





# ROOFPOINT SECTIONS

## ENERGY MANAGEMENT



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CREDIT	TITLE	REQUIREMENT
E1	<b>High R Roof Systems</b>	Increase Roof R Value
E2	<b>Best Thermal Practices</b>	Reduce Thermal Discontinuities
E3	<b>Roof Surface Thermal Contribution</b>	Install Climate-Appropriate Roof Surface
E4	<b>Roof Air Barrier</b>	Install Air Barrier
E5	<b>Rooftop Energy Systems</b>	Install Solar Energy
E6	<b>Rooftop Daylighting</b>	Install Daylighting

# MATERIAL / WATER MANAGEMENT



<b>CREDIT</b>	<b>TITLE</b>	<b>REQUIREMENT</b>
M1	<b>RECYCLED CONTENT</b>	Increase Recycled Product Content
M2	<b>MATERIAL REUSE</b>	Increase Material Reuse
M3	<b>WASTE MANAGEMENT</b>	Reduce Roofing Waste & Scrap
M4	<b>LOW-VOC MATERIALS</b>	Reduce VOC Content
W1	<b>ROOF STORM WATER RETENTION</b>	Install Vegetated or Water-retaining Roof System
W2	<b>ROOF-RELATED WATER USE REDUCTION</b>	Capture Roof Water for Landscaping

# ROOFPOINT SECTIONS

## DURABILITY



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CREDIT	TITLE	REQUIREMENT
D1	<b>Durable Roof Insulation</b>	Install Durable Insulation System
D2	<b>Roof Drainage Design</b>	Assure Positive Roof Drainage
D3	<b>Roof Traffic Protection</b>	Provide Traffic Protection
D4	<b>Increased Wind Resistance</b>	Increase Wind Uplift Rating
D5	<b>Hygrothermal Analysis</b>	Conduct Project Moisture Analysis
D6	<b>Construction Moisture Management</b>	Conduct Project Moisture Management

# ROOFPOINT SECTIONS

## LIFE CYCLE MANAGEMENT



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CREDIT	TITLE	REQUIREMENT
L1	<b>Roof Maintenance Program</b>	Establish Ongoing Maintenance Program
L2	<b>Project Installation Quality</b>	Establish Contractor Quality Program

# SIMPLE NEW WEB-BASED APP



RoofPoint Account Login screen with fields for email (jhoff@roofingcenter.org) and password, and buttons for Login and Create Account.

Log In

RoofPoint Dashboard screen showing current status, a table of projects, and a 'Start New Application' button.

PROJECT NAME	DATE CREATED	STATUS	ACTIONS
Davis Center Univ of Wisconsin Eau Claire	September 20, 2012	New	EDIT
Test Project	August 20, 2012	New	EDIT

Start New Project

RoofPoint Application Data Entry screen with various form fields for project information.

**PROJECT INFORMATION**

Project Name: Davis Center Univ of Wisconsin Eau Claire  
 Project City: Eau Claire  
 Project Country: United States  
 Project State: Wisconsin  
 Project Type: New  
 Roof Sq. Ft.: 18000  
 Roof Covering: PVC  
 Roof Covering Sq. Ft.: 18000  
 Year Completed: 2012  
 ASHRAE Climate Zone: 6  
 Primary Roof Insulation: Polyiso  
 Primary Roof Insulation Sq. Ft.: 18000  
 Insulation R-Value: 35

Enter Project Data

RoofPoint Application Team Members screen with a table for adding team members.

Check if Applicable	Company Name	Key Contact Name	Email Address	City	Country	State
<input checked="" type="checkbox"/>	Roofing Center	Johanna Hoff	jhoff@roofingcenter.org	Eau Claire	United States	Wisconsin
<input checked="" type="checkbox"/>	F. A. Chasewick	D. Schmitt	gschmitt@fasch.com	Wisconsin	United States	Wisconsin
<input checked="" type="checkbox"/>	Vesco	Robert Dever	Robert.Dever@Vesco.com	Canada	United States	Pennsylvania

Enter Team Members

RoofPoint Application Key Features and Benefits screen with a table for adding features.

Feature	Credit No.	Eligible Benefits
Green Roofs	1	Energy Efficiency, Reduced Heat Island Effect
Storm water retention, energy efficient, reduced heat island effect	1	Energy Efficiency, Reduced Heat Island Effect
High Value	1	Energy Efficiency
Energy efficiency	1	Energy Efficiency
Low VOC products used	1	Energy Efficiency
Reduced ground level contamination	1	Energy Efficiency

Enter Features/Benefits

RoofPoint Application Energy Management screen with a table for adding energy management items.

Item	Credit No.	Eligible Benefits
Energy Efficient Windows	1	Energy Efficiency
Energy Efficient Doors	1	Energy Efficiency
Energy Efficient HVAC	1	Energy Efficiency
Energy Efficient Lighting	1	Energy Efficiency
Energy Efficient Appliances	1	Energy Efficiency

Score Each Credit

RoofPoint Application Sources screen with a table for adding sources.

Source	File Name	Date	Actions
Project Photos	IMG_001.jpg	September 20, 2012, 08:30	EDIT
Project Photos	IMG_002.jpg	September 20, 2012, 08:30	EDIT
Vendor Information	No File Uploaded	September 20, 2012, 08:30	SELECT
Project Certification / Warranty	No File Uploaded	September 20, 2012, 08:30	SELECT
Project Design Calculations	No File Uploaded	September 20, 2012, 08:30	SELECT
Project Plan Documents	No File Uploaded	September 20, 2012, 08:30	SELECT
Third Party Certification	No File Uploaded	September 20, 2012, 08:30	SELECT
Manufacturer Product Data Sheet	No File Uploaded	September 20, 2012, 08:30	SELECT
Project Specifications / Drawings	No File Uploaded	September 20, 2012, 08:30	SELECT

Attach Photos & Docs

RoofPoint Application Application Status screen with a table showing application progress.

Item	Score	Number of Credits	Points
General Information	1	1	1.0
Roofing Team Members	17	17	17.0
Key Features and Benefits	1	1	1.0
Energy Management	1	1	1.0
Material Management	1	1	1.0
Water Management	1	1	1.0
Durability/Life-Cycle Management	1	1	1.0
Innovation in Building	1	1	1.0
<b>Total Project Points</b>			<b>35.0</b>

Submit Project

PROJECT SUBMISSION IS SIMPLE AND FAST – YET DETAILED AND COMPREHENSIVE

# VALUABLE ON-LINE DATA BASE



## PROJECTS LISTED IN A SEARCHABLE ON-LINE DATABASE

ROOFPOINT PROJECT DATABASE

SEARCH THE DATABASE >

PROJECT # A	PROJECT NAME	CITY, STATE, COUNTRY	SUBMITTED BY	CONTRACTOR	DESIGNER	POINTS	DATE REGISTERED	ROOF SYSTEM MANUFACTURER	MATERIALS MANUFACTURER	ROOF SIZE	R-VALUE
RP072	SUNY ESF Gateway Building	Syracuse, NY	Carlisle Construction Materials	Diamond Roofing Company, Inc.	-	31.0	03.01.2012	Carlisle Syn Tec	-	25,000 sf	R-25
RP071	Aurora Police Station	Aurora, IL	Tremco Roofing and Building Maintenance	Olsson Roofing	Cordogan Clark & Associates	20.5	02.16.2012	Tremco Roofing and Building Maintenance	-	28,548 sf	R-26
RP070	Malozemoff Technical Facility	Englewood, CO	United Materials	United Materials	United Materials	21.5	02.09.2012	Johns Manville	-	61,500 sf	R-34
RP069	HCHD Imaging Clinic	Houston, TX	Jolly Roofing and Contracting	Jolly Roofing and Contracting	HOK Architects	25.5	02.09.2012	Firestone Building Products	-	59,200 sf	R-25
RP068	Syscom Tech	Moorestown, NJ	Advanced Green Technologies	Advanced Green Technologies	Advanced Green Technologies	13.0	02.02.2012	GAF	-	30,000 sf	R-0
RP067	General Motors Automotive Care & After-sales Warehouse	Lansing, MI	Sika Sarnafil	National Roofing & SM Co., ChristenDETROIT	Martin Riley, Inc.	22.5	02.03.2012	Sika Sarnafil	-	475,000 sf	R-16
RP066	FedEx Cargo Relocation Facility	Chicago, IL	Sika Sarnafil	All American Exterior Solutions, Interior Landscaping	Solomon Cordwell Buenz	20.5	02.03.2012	Sika Sarnafil	-	208,000 sf	R-24
RP065	WW Estes Elementary School	Asheville, NC	Carlisle Construction Materials	Stroup, Inc.	-	15.5	01.31.2012	Carlisle SynTec	-	9,200 sf	R-30
RP064	SKECHERS Distribution Center	Moreno Valley, CA	Firestone Building Products	CRS Commercial	-	19.0	01.27.2012	Firestone Building Products	-	1,814,300 sf	R-0
RP063	DERBIGUM Manufacturing Plant	Kansas City, MO	DERBIGUM Americas, Inc.	Western Roofing Company	-	26.5	01.25.2012	DERBIGUM Americas, Inc.	-	44,000 sf	R-20

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ROOFPOINT VALUE

# EXCELLENCE IN DESIGN AWARD



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*SUBMIT YOUR ROOFPOINT PROJECTS FOR  
ANNUAL EXCELLENCE IN DESIGN AWARD*



- *Multiple Award Categories*
  - *Excellence in Energy Management*
  - *Excellence in Material Management*
  - *Excellence in Water Management*
  - *Excellence in Life Cycle Management*
  - *Excellence in Re-Roofing*
  - *Global Leadership*
  - *Community Leadership*
  - *Private Sector Leadership*
  - *Public Sector Leadership*
  - *Advancing Sustainable Roofing*
- *Extensive national and local press coverage*

ROOFPOINT UPDATE

# POISED FOR SUCCESS



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*“After three years of investment, RoofPoint is a proud achievement for the roofing industry. From initial development to now over 250 certified projects across North America, RoofPoint is poised to make a real impact in transforming the way the construction industry, and more broadly, the public views the role of the rooftop”*

*Report to Roofing Alliance for Progress  
April, 2013*







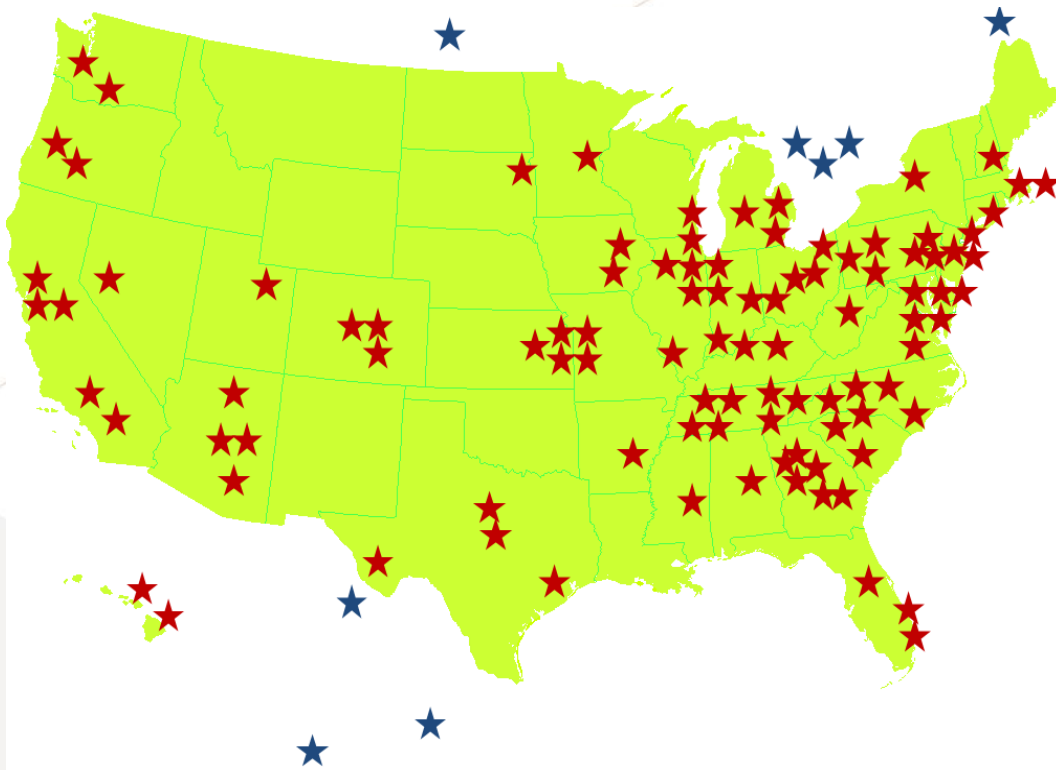
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# ROOFPOINT PROFILES

# VISIBLE NORTH AMERICA FOOTPRINT



RoofPOINT



- Projects in 35 U.S. states, Canada and Mexico
- Participation by over 100 roofing contractors
- Projects cover almost every type of roofing system, including single-ply, metal, modified bitumen, BUR, & SPF
- Good balance between new construction and re-roofing

# SUSTAINABLE FACTORY



Hershey Foods West  
Hershey, PA

- ◆ Cool roof surface saves energy and reduces peak cooling demands
- ◆ High performance cover board and high-R insulation system reduces overall building energy demand
- ◆ Enhanced wind uplift design and increased roof membrane thickness extend roof service life

# ROOFPOINT PROFILE SUSTAINABLE SPF



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Springs HOA  
Rancho Mirage, CA

- ◆ Continuous R-10 above deck plus R-38 in attic beneath exceeds ASHRAE 189.1
- ◆ Seamless SPF application eliminates thermal discontinuities and provides air barrier
- ◆ Highly reflective (SRI = 91) coating increases energy efficiency and reduces urban heat island effect
- ◆ Skylight system reduces artificial lighting demand
- ◆ Application of additional coating layer and roofing granules increases durability and service life

# CLOSED LOOP RECYCLING



GM After Sales Warehouse  
Lansing, MI

- ◆ Existing PVC roof removed and recycled into new PVC roofing material (a portion of which was re-installed on this project)
- ◆ 100% landfill-free project
- ◆ Highly reflective roof surface reduces net and peak energy requirements and mitigates heat island effects
- ◆ Durable roofing system extends working life of existing building

ROOFPOINT PROFILE

# HIGH PERFORMANCE OFFICE



ROOFPOINT



Heartland Consumer Power  
Madison, SD

- ◆ Recycled content of steel roofing material promotes responsible material use
- ◆ Rooftop PV system provides portion of building power
- ◆ Medium albedo roof surface reduces peak summer air conditioning usage with minimal winter heating offset

# ROOFPOINT PROFILE SUSTAINABLE REROOF



RoofPoint



- ◆ Cool roof surface saves energy and reduces peak cooling demands
- ◆ Extensive reuse of existing roof insulation minimizes landfill waste
- ◆ Increased roof membrane thickness extends roof service life
- ◆ Rooftop solar PV system provides electricity for the building

J & J Manufacturing  
Lititz, PA

# ROOFPOINT PROFILE

## SUSTAINABLE LEARNING



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Bucks County Community College  
Perkasie, PA

- ◆ Extensive vegetative system offsets building footprint for storm drainage and heat island effects
- ◆ High performance multi-layer insulation system provides high level of energy efficiency, staggered joints break thermal discontinuities, coverboard provides R-value and durable surface
- ◆ Protected roof membrane system increases durability and service life
- ◆ Plaza paver systems provides recreational space





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# ROOFPOINT: 2013 AND BEYOND

# ROOFPOINT VALUE ON-LINE CERTIFICATES\*



RoofPoint



*RECOGNIZE EVERY MEMBER  
OF YOUR PROJECT TEAM WITH  
PRINTABLE CERTIFICATES:*

- *Building Owners*
- *Facility Managers*
- *Suppliers and Subcontractors*
- *GC / Construction Managers*
- *Architects / Roof Consultants*

\*Coming in May, 2013

ROOFPOINT VALUE

# REGISTERED PROFESSIONAL



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## ROOFPOINT REGISTERED PROFESSIONAL (RRP)

- Formal certification for professional interpretation and use of the RoofPoint guideline
- Targeted to all roofing professionals: Estimators, project managers, roof consultants, facility managers, architects, roofing specifiers
- Currently in pilot program for CEIR members
- On-line application and examination available in 2014



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# A WORD ABOUT THE CENTER

# MEMBERS



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United Materials



ADVANCED GREEN TECHNOLOGIES

William Wallace Collins, LLC





816 CONNECTICUT AVENUE, NW  
WASHINGTON, DC 20006



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## THE CENTER

- ▶ **Public Advocacy**
  - Codes and standards
  - Government policy
- ▶ **Roofing Research**
  - Standing research committee
- ▶ **Sustainability**
  - Insulation; Building Envelope
  - Photovoltaics Task Force
- ▶ **International Outreach**
  - Latin America, plus
- ▶ **Member Support**
  - ▶ Market support
  - ▶ Education and training



**RoofPOINT**

ELEVATING ENVIRONMENTAL PERFORMANCE

# OPTIMIZING THE SUSTAINABLE VALUE OF THE ROOF

March 21, 2013